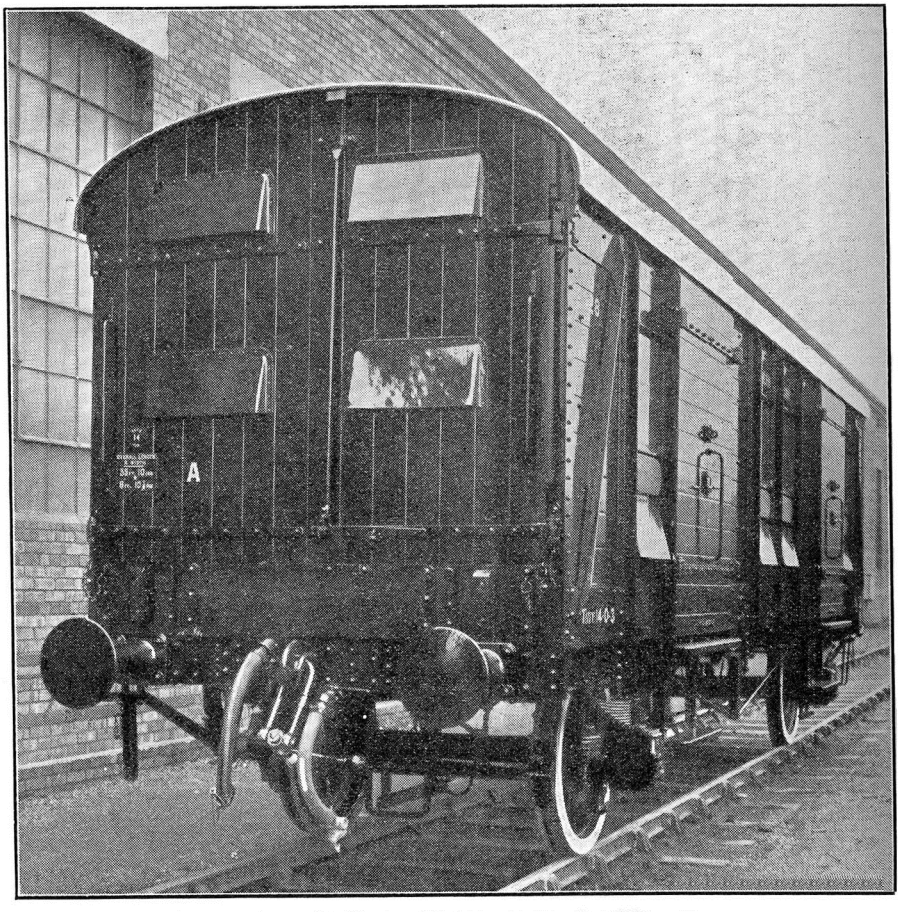
# The Construction of "0" Gauge Vehicles for the Beginner.

## The Southern Railway General Utility Van.

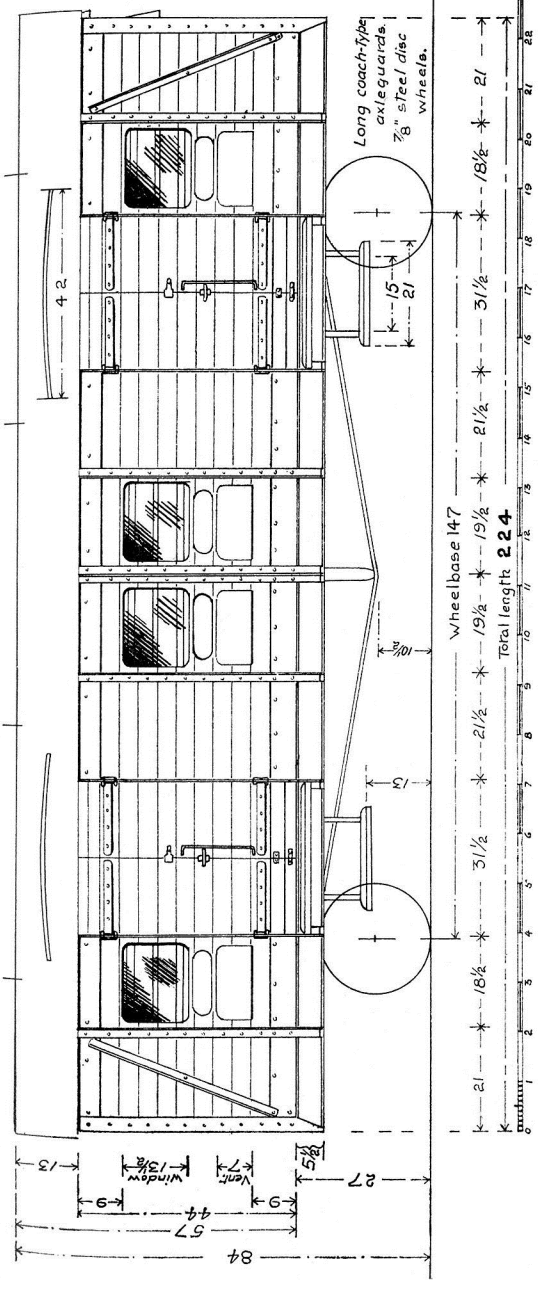
By "SPARKS."

(*Continued from page* 83.)

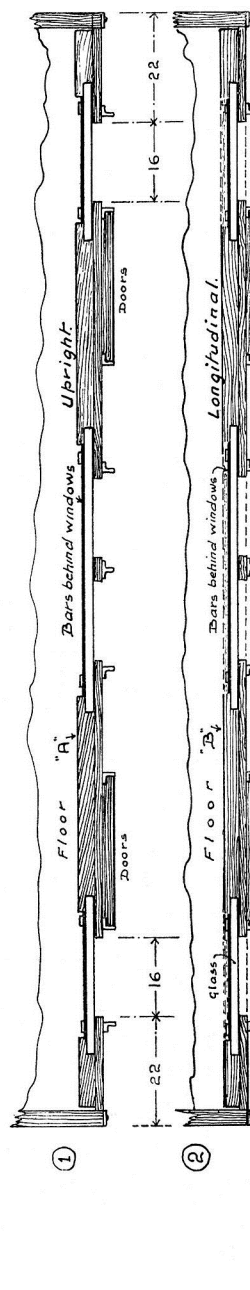
I PROMISED at the end of my last article on page 83 in the March issue to next deal with the G.W.R. "large" cattle van. In the meantime drawings and a photograph of the Southern Railway general utility van have come to hand from the Southern Railway authorities, and as I had first promised our Editor to deal with this as soon as I had obtained the necessary particulars, the following article is inserted in place of the one on the G.W.R. vehicle.



A Southern Railway 10-ton general utility van.




Side elevation of a Southern Railway general utility van dimensioned in millimetres for a gauge "0" model.




Sections, showing methods of constructing the sides of the gauge "0" S.R. general utility van.

### Use and Characteristics

This attractive vehicle, as its name implies, is used for all classes of traffic, except livestock. An excellent description of it appeared in The *Locomotive*, June, 1928, issue. The Midland Railway-Carriage and Wagon Co., Ltd., have built 50 and the Southern Railway a further 30, so that they are fairly numerous now. They have end doors for loading motor cars, aeroplane parts, scenery, etc., and side doors, which, at a casual glance at the photograph look as if they were sliding, but they are not—perhaps the overhang roof gives that effect. They are fitted with both vacuum and hand brakes and steam pipes for heating.

From the model point of view there are a lot of gadgets which catch the eye : 16 ventilating bonnets of pressed steel (15 mm. by 7 mm.), four windows per side (16 mm. by 13½ mm.), and underneath those, four destination slates per side (13 mm. by 4 mm.). The side angle-section stanchions L and T are very heavy, and in the model can be made of 3/32 in. angle brass as sold by Messrs. R. F. Stedman and Co., Ltd., or Bond's.

### Materials Required

Wood.—Floor and ends, ⅛ in. thick ; sides, 1/16 in. thick, obtained from Bond's or Messrs. Winteringham's, Ltd., Northampton ; 1/10-in. wood can be used, but it throws the glass of the windows so far back ; doors, 3/32 in. thick.

Brass Angle Sections.—L, 3/32 in. and the T section.

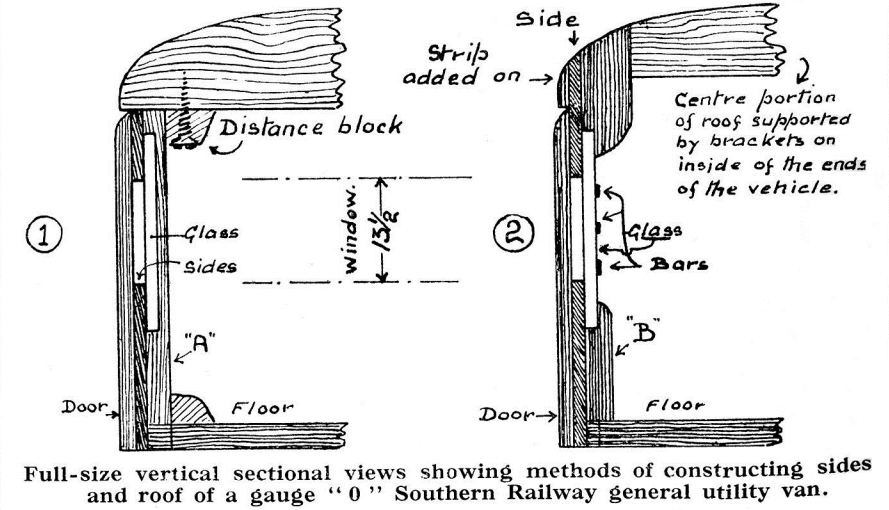
Brass or steel rod approximately 1/16-in. dia. for underframe tie rod.

Glass for Windows. — Microscope slides may come in handy. Glass should be about 1/16 in. thick and cut in two sizes—for the four outer windows 1 in. by 1¼ in., and for the two central pair of windows 1 in. by 2¼ in.

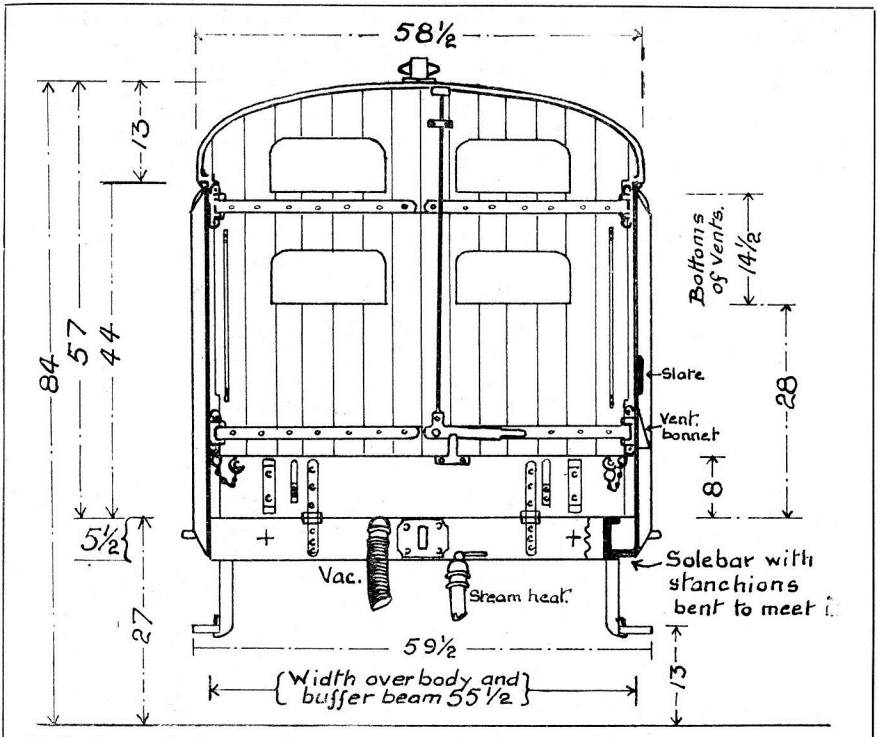
### Constructional Notes

The ends are of wood, ⅛ in. thick. Bottom panel plain, which is hinged to fall over the buffers for end loading, top half planked, with grooves 3/20 in. apart (these are 6⅜ in. apart in the prototype), spaced from the centre. The bar operating the door is not vertical.

The sides are somewhat complicated, and model builders can choose one of two or three methods of construction




**Full-size vertical sectional views showing methods of constructing sides and roof of a gauge " 0 " Southern Railway general utility van.**




**Full-size end view of a gauge " 0 " Southern Railway general utility van.**

and assembly. As there are four windows per side I advise using the thin 1/16-in. thick wood, in which case strengtheners must be used, and these can be utilized to hold the glass in place. There are two ways shown how to do this: (1) in both diagrams has vertical supports, while (2) has supports running lengthways of the vehicle at the top and bottom of the glass.

One point worth noticing is that the glass should be as narrow as possible, otherwise it will interfere with the pins holding the L and T stanchions in place. The drawings and photograph will explain this.

Note how the stanchions come down to the bottom level of the solebar and then are bent in at right angles to meet it (*see* end-elevation drawing).

There are steel plates along the top and bottom edges of the sides, except at the top of the doors. These can be made of very thin tin strips 4 mm. wide at the top and a shade over 5 mm. wide along the bottom. These should be put on first, as the stanchions fit over them.

There are no corner L angle pieces, but a flat plate up the corner of the sides.

Doors, 3/32 in. thick, tapered at top, to fit over L uprights.

The outer edges of the end windows are 22 mm. from the ends.

The destination slate panels under the windows can be made of strip brass or tin about 1 mm. thick and painted light grey.

**Assembly**

Either all the gadgets can be put on the sides, with glass in and bars behind, before sides are assembled to ends and floor, or if builders prefer they can assemble sides, ends and floor

and add these before roof is on. The stanchions require careful fitting, but need not be soldered to the solebar.

**Roof**

The simplest method is to make it in one block 58½ mm. wide by ⅝ in. deep, planing down to 13 mm. deep when finished—this to fit in between the two ends. This can, of course, be used whichever method is used for making the sides. A distance piece should be screwed or nailed along the bottom—position to be determined by trial, depending upon the thickness of the wood used for sides—to keep sides in correct position.

The other and rather more complicated method is put in for those who like to build this way.

**Underframe Details**

I have not got the brake gear drawing, but hope to show this in the next Southern Railway article.

Wheels, steel disc ⅞-in. diameter; long coach-pattern axleguards from R. F. Stedman & Co., Ltd.; round buffers and screw couplings.

Central support to tie rods a T section with web inwards; step supports, L section with hollow side inwards; tie rod, a 1/16-in. round bar.

The solebars are U channel section sold by Bond's of Euston Road.

**Other Details**

Roof ventilators, Southern type or late L.N.W.R.

Ventilating bonnets are pressed steel, as can be seen in the photograph, but can be made of wedge-shaped wood.

Painting.—Southern green on body; lettering, gold (yellow); roof white; all underframe details black.

I am indebted to the Southern Railway for supplying me with drawings and photograph and through whose courtesy I am enabled to reproduce them here.

**The Next Article.**—This will deal with the G.W.R. "Large" Cattle Van.

*(To be continued).*

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# Fluted Coupling Rods for Gauge "0" Locos.

By L. J. Perkins.

THE appearance of model locomotives is greatly enhanced if they are fitted with fluted coupling rods. To make this flute without milling it out, I have used Bond's 7-mm. scale rail.

Cut off a piece of rail to a little over the required length and mark the coupling-pin centres.

Obtain some brass washers 3/16-in. diameter and file slots in the webs of the brass rail so that the washers just fit in them nicely with the centres of their holes over the pin centres, as shown in sketch. Now tin the washers on one side and also the slots in the rail.

Fit the washers in place, and heat until solder runs and makes a nice joint. Drill 3/32-in. holes through rail at centres. Round off the ends of the rail to follow the contour of washers, and file surface of washers down flush with the rail. Scrape out all superfluous solder from the flute and you have your coupling rod. They work up quite as well for six or eight-coupled locos as they do for a four-coupled loco. If suitable washers cannot be found, substitute round pieces of brass sheet, about 1/32-in. thick, and drill when soldered in place. The coupling rods are intended to be used with 8 B.A. coupling pins.